

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
12 May 2005 (12.05.2005)

PCT

(10) International Publication Number
WO 2005/042064 A1

(51) International Patent Classification⁷: **A61M 1/12**, C08J 7/18

(21) International Application Number:
PCT/AU2004/001490

(22) International Filing Date: 28 October 2004 (28.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003906051 31 October 2003 (31.10.2003) AU

(71) Applicants (for all designated States except US): VEN-TRACOR LIMITED [AU/AU]; 126 Greville Street, Chatswood, NSW 2067 (AU). THE UNIVERSITY OF SYDNEY [AU/AU]; NSW 2006 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COOK, Martin,

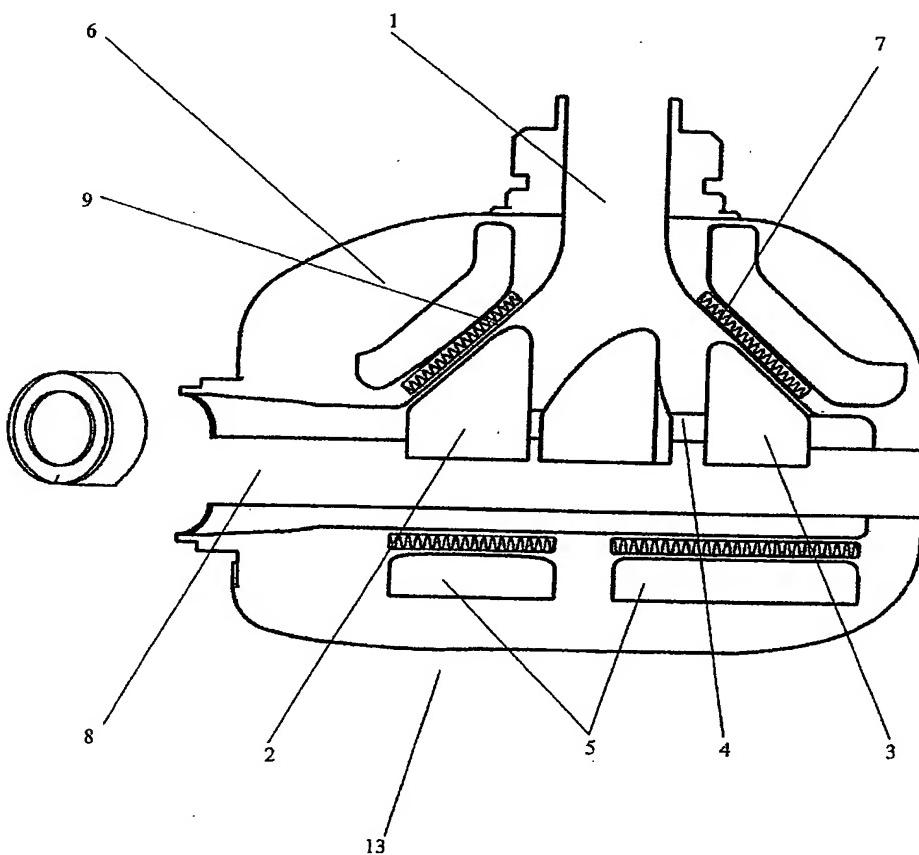
Christopher [AU/AU]; Unit 3, 65 Beam Street, Coogee, NSW 2034 (AU). JAMES, Natalie [AU/AU]; 104 Holt Avenue, Mosman, NSW 2088 (AU). FUJISAWA, Naoki [JP/AU]; 15 Lightcliff Avenue, Lindfield, NSW 2070 (AU).

(74) Agent: HODGKINSON McINNES PAPPAS; Level 3, 20 Alfred Street, Milsons Point, NSW 2061 (AU).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: IMPROVED BLOOD PUMP COMPRISING POLYMERIC COMPONENTS



(57) Abstract: A rotary blood pump (13) including: a motor adapted to magnetically rotate an impeller (2) within a housing (6). The impeller and/or the housing are formed of a composite material and the composite material includes a first material that is a relatively, insulative, biocompatible and impermeable polymer. The composite material may include a second material that reinforces the polymer.



(84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*